

REPORT

Fire and Building Codes and the
Jurisdiction and Compliance of
Federal, State, State Authorities
and Foreign Government Buildings.

Dated: March 25, 1993

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INTRODUCTION

Following the explosion at the World Trade Center on February 26, 1993, First Deputy Mayor Steisel requested a report from the Fire and Buildings Commissioners addressing the following matters:

- Buildings and Fire Departments' Jurisdiction and Enforcement Authority p.1
- City Jurisdiction over Federal, State, State Authorities and Foreign Government Buildings p.3
- Current Agreements with Entities Not Subject to the City's Jurisdiction
- Code Compliance at the World Trade Center p.6
- Recommendations

The following report sets forth our findings to date.

BUILDINGS AND FIRE DEPARTMENTS' JURISDICTION AND ENFORCEMENT
AUTHORITY

The Buildings Department (DOB) reviews plans for new buildings and alterations to assure compliance with Building Code and Zoning requirements. As part of that review, DOB examiners insure that plans comply with fire safety features, particularly those required by Local Law 5 of 1973 and Local Law 16 of 1984. For existing buildings under its jurisdiction, DOB tracks compliance with fire safety measures in Local Laws 5 and 16 to ensure that retrofitting has been accomplished.

In general, under Local Law 5/73, existing high-rise office buildings (over 100 feet tall) had to install the following:

- Fire Alarm Communication System (FACS)
 - Fire Command Station
 - Alarm (gong, bell, speaker)
 - Fire alarm pull box by each exit way on each floor
 - Speaker for communication from fire command station to any floor
- Elevator-in-Readiness (EIR)
 - At fire signal all elevators descend to the ground floor automatically and remain there
 - Only fireman key will operate elevator
- For centrally air conditioned buildings only, install one of the following:
 - - Sprinkler throughout
 - Stairwell pressurization (fans blow air from outdoors into stairwell) and compartmentation (Fire-rated (1 hour) partitions dividing all floor areas in sections or compartments of 7,500 square feet or less).

Local Law 16/84 added the following safety requirement for existing high-rise office buildings:

- Emergency powered exit lights and signs (either battery pack or alternate power source)

All new high-rise office buildings must be fully sprinklered and have smoke control systems. In addition to office buildings, Local Law 16/84 extended fire safety requirements on a selective basis to several other categories of buildings, including institutions, hotels, mercantile establishments, and industrial buildings. As a result, Local Law 16/84 covers approximately 22,000 buildings.

There are 800,000 buildings in New York City. DOB inspectors are utilized to respond to 35,000 safety and zoning complaints annually, and inspect approximately 100,000 jobs which have been filed with DOB for code compliance. In some of the more critical life safety areas, periodic inspections are required by the Building Code. For example, the Code requires periodic elevator inspections by DOB inspectors. Facade and boiler inspections must be filed with DOB by licensed professionals on behalf of building owners. However, DOB inspectors do not perform periodic inspections of the 800,000 buildings in the five boroughs.

In addition to its firefighting and other emergency response jurisdiction, the Fire Department is responsible for inspecting and recommending approvals for, among other things, highly complex and sophisticated fire and voice alarm and communication systems in office buildings, hotels, hospitals, schools, nursing homes, shelters, colleges and universities. It issues permits and conducts a variety of fire safety inspections, including witnessing tests of standpipe and sprinkler systems in high-rise office buildings. The Hi-Rise Unit of the Fire Department's Bureau of Fire Prevention performs inspections at office and hotel buildings and administers on-site examinations to certify fire safety directors. Hi-Rise Unit inspectors also conduct inspections under Local Laws 5 of 1973 and 16 of 1984 with respect to Fire Safety Directors, Class "E" Alarm Systems, Fire Safety Plans and Fire Command Stations.

The Fire Department has general enforcement jurisdiction over the Fire Prevention Code and has limited concurrent jurisdiction with DOB to enforce certain sections of the Building Code. Where certain violations are found, the Fire Department issues Notices of Violation which are returnable before the Environmental Control Board and for other violations, summonses are issued which are returnable before the Criminal Court. In the usual case, the issuance of a Violation Order which provides the respondent with a certain time period for correction of the defective condition, precedes the issuance of a summons; a summons is only issued where no correction is made.

CITY JURISDICTION OVER FEDERAL, STATE, STATE AUTHORITIES AND
FOREIGN GOVERNMENT BUILDINGS

Buildings owned by the federal or state governments or by state-created entities are not subject to the City's Fire Prevention and Building Codes, unless provided for or authorized by statute. For example, the School Construction Authority is required by statute to comply with local codes. In contrast, state legislation provides that New York City codes will apply to the World Trade Center (WTC) only if an agreement signed by the Port Authority with the City so provides. State law also provides that local laws will apply to the Urban Development Corporation (UDC) and its subsidiaries unless the UDC or its subsidiary determines that such compliance is not feasible or practicable.

Jurisdiction over foreign government-owned property in the United States is vested in the Office of Foreign Missions ("OFM"), which is within the United States Department of State. Federal legislation exempts from preemption any local law regarding, inter alia, land use, health, safety or welfare. It has been the practice of the OFM to so advise such governments; however, at the present time, there appears to be a dispute between the United States Mission to the United Nations and the OFM as to whether such compliance is required. As a result, we have asked the Law Department to examine this question.

CURRENT AGREEMENTS WITH ENTITIES NOT SUBJECT TO THE CITY'S JURISDICTION

a. Formal Agreements

The Fire Department's Bureau of Fire Prevention has entered into a number of formal agreements, e.g., memoranda of understanding, with the following entities:

1. "Protocol for Periodic Joint Port Authority/Fire Department of New York Inspections of Port Authority New York City Facilities" signed by former Commissioner Bruno on November 4, 1988: provides for Fire Department evaluation of fire protection at various sites selected by the Port Authority; Port Authority is exempted from paying inspectional and permit fees.
2. "WTC/FDNY Joint Protocol for Inspectional Activity at the World Trade Center Complex," signed by former Commissioner Spinnato on September 2, 1986: key aspects are that a) the Fire Department is allowed to inspect and issue advisory inspectional reports, b) Fire Department is allowed to test fire safety directors at the WTC on the service equipment and fire safety plan, although the Fire Safety directors are not mandated to obtain Certificates of Fitness from the Fire Department, and c) WTC is exempt from all inspectional and permit fees.
3. "Fire Department, City of New York/ New York City Transit Authority Joint Report to Mayor Dinkins Regarding Fire Safety in the New York City Transit System": contains procedures for emergency response by Fire Department to Transit Authority subway system sites.
4. "Agreement Between the New York Power Authority and the Fire Department of New York City concerning the Joint Inspection of the Charles Poletti Power Project": Fire Department is permitted to inspect and issue advisory inspectional reports.
5. "Agreement between the United Nations and the Fire Department of New York City concerning Joint Inspection of United Nations Firefighting Equipment and Facilities": Fire Department inspects and issues "confidential report of its findings and recommendation for desirable corrective action." United Nations exempt from inspectional and permit fees.

6. "Agreement between Metro-North Commuter Railroad Co. and NYFD for fire safety procedure on the railroad's property in NYC": commitment to provide Fire Department with information vital to responses to track emergencies; and to retain engineering firm to submit comprehensive analysis of its fire prevention and alarm systems and make recommendation for total compliance with the City's Fire Prevention Code.
7. "Memorandum of Understanding between the New York City Fire Department and the New York State Department of Environmental Conservation": establishes uniform procedure for response to petroleum discharge incidents in New York City and for Fire Department obtaining reimbursement for its cleanup costs.

Although all of the above agreements are in force, it should be noted that the agreements with the United Nations and the New York Department of Environmental conservation were never formally signed by the parties.

b. Informal Agreements

Informal arrangements have been developed with several Federal, State and State Authorities locations within the City whereby Fire Department personnel visit these locations for the purpose of conducting fire safety inspections. For example, the Fire Department has been allowed to conduct regular inspections at the New York State Office of Mental Health at 50 Nevins Street in Brooklyn, the New York State General Services Administration Building at 60 Centre Street in Manhattan and the United States General Services Administration Building at 26 Federal Plaza in Manhattan. The Fire Department also responds to complaints received concerning these locations and, if granted access, performs a fire safety inspection. If violations of the Fire Prevention Code are found, the Fire Department will issue letters listing fire safety defects (violations). Since the Fire Department has no enforcement powers in these occupancies, follow-up of violations is made by sending correction letters. However, response from these agencies to Fire Department letters of defect has been poor.

CODE COMPLIANCE AT WORLD TRADE CENTER

a. History

The history of Fire Department involvement with fire prevention and protection at the WTC began with the origin of the WTC project in the mid-1960's. Over the years, the Fire Department exhorted the Port Authority to improve the fire safety in these towers. Between 1974 and 1978, numerous meetings were held between high level officials of the Fire Department and the WTC concerning modification of the WTC Towers to comply with Local Law 5 standards. The result of this was that a timetable was set by the WTC for bringing the towers into compliance. While significant progress has been made, there has not been total compliance to date.

After several major fires in the 1970's, the Fire Department in 1975 testified at the City Council for the need to have jurisdiction over this complex as well as other buildings owned by public benefit corporations, again particularly for Local Law 5 compliance. As a result, the City Council forwarded a Resolution dated August 29, 1975 to the State legislature. (See Attachment I). Proposed legislation which would have granted City agencies jurisdiction was introduced in the State legislature over the years; the State has not enacted such legislation.

It is important to note that, in regard to the Port Authority, the trend in recent years has been towards cooperation. Most importantly, a program to fully sprinkler the Tower buildings began in the mid-1980's and is nearly completed in Tower 2 and approximately 85% complete in Tower 1.

Prior to the February 26, 1993 explosion, the Fire Department acted pursuant to the joint protocol for inspectional activity at the WTC which was signed in 1986. The PA's policy was to voluntarily cooperate with the Fire Department "to the fullest extent practicable". Fire Department representatives met continually with PA officials to discuss problems with the WTC's emergency procedures and fire safety equipment. Generally, the PA was cooperative and verbally informed the Fire Department that it was their intent to fully comply with Local Law 5. However, since its compliance with fire code requirements was dependent upon economic and design feasibility, the PA agreed to comply with selected provisions of the code, but has not fully done so. Moreover, it was difficult for the Fire Department to monitor code compliance by the WTC because the WTC consistently asserted its legal exemption from local law. Fire officials relied on persuasion and negotiation to gain compliance. The extent of these negotiations is reflected in the voluminous WTC files

maintained at the Fire Department. Code compliance at the WTC has been dealt with by every Fire Commissioner and Chief of Department over the last twenty-five years.

b. Compliance at Time of Explosion

The fact that the WTC may have been constructed to codes other than New York City codes does not mean the WTC is or was unsafe. The codes followed at the WTC certainly had safety factors built in. While not exactly duplicative of City codes, they may have had equivalencies or even exceeded local codes.

A preliminary review by DOB generally indicates that the WTC complies with the specific fire safety requirements of Local Law 5/73 and Local Law 16/84, or provides acceptable equivalent systems. // ← ?

In fact, in several areas the WTC exceeds the requirements of these local laws. For example, the New York City Building Code requires that emergency power to exit lights and exit signs be on separate circuits ahead of the main switch. At the WTC, such power is provided by separate feeders as well as emergency generators. Similarly, smoke shafts or stair pressurization are not required by the Building Code where an office building is sprinklered. The WTC is not only 85-95 percent sprinklered, but also has smoke purge and corridor pressurization systems in place. Again, while emergency power in existing buildings is not required under Local Law 16/84, emergency power is provided at the WTC.

The major departure to our knowledge from the requirements of Local Law 5/73 and Local Law 16/84 is the fire alarm system. For example, each building at the WTC ~~does not have its own fire command station, has only one pull station on each floor and does not provide public address to all areas of all floors.~~ //

The following chart provides a general and preliminary comparison between the major system requirements of Local Laws 5/73 and 16/84 with the conditions in place when the explosion occurred:

	Type of Work Code Section	Compliance
1	Compartmentation Sec. 504.1 (c)	Not required in sprinklered buildings.
2	Smoke shaft or stair pressurization Sec. 504.15 (c)	Not required in sprinklered buildings. However smoke purge and pressurization of corridors with 100% fresh air is provided
3	Emergency power exit lights Sec. 605.2 (b)	Exceeds requirement. Required - On separate circuit ahead of main switch Provided - Separate feeders and emergency generators - Note "A"
4	Emergency power exit signs Sec. 606.2 (b)	Exceeds requirement. Required - On separate circuit ahead of main switch. Provided - Separate feeders and emergency generators - Note "A"
5	Stair & elevator signs Sec. 608.0	Yes.
6	Emergency power Sec. 610.0	Exceeds requirement. Required - None. Provided - See note "A" above
7	Sprinklers Sec. 1703.1	Yes 95%} completed for one tower 85%} completed for other tower

	Type of Work Code Section	Compliance
8	Class "E" fire alarm signal system Sec. 1704.5 (f)	Yes - But air supply and exhaust air to fire floor are not closed off when sprinklers are activated. Note: equivalent system provided by item #2 above and smoke detectors at fans, which stop fans.
9	Fire command & communication Sec. 1704.8	Yes - except that each building does not have its own fire command station
10	Elevator in readiness Sec. 1800.8 (b)	Yes - See note "A" above
11	Removal of locks on elevators & hoistway doors Sec. 1801. 4	Yes
12	Firemen's service operation Sec. 1801.5	Yes - See note "A" above

The Fire Department's most recent inspection revealed the following defective conditions:

1. failure to have certified fire safety directors; ^{in units}
2. failure to have available information identifying fire wardens and deputy fire wardens;
3. failure to have exit stairs properly identified; ^{??}
4. failure to have an organization chart for fire drill and evacuation assignments on each floor; and
5. failure to have fire safety plans and floor plans available at the Fire Command Station. ///

c. Reopening

The Fire Department has worked closely with the Port Authority to re-open the World Trade Center. It is important to note that the basic fire protection systems have been restored to full operation. For example, the sprinkler, standpipe, emergency power, fireman service, elevator and alarm systems, that were in existence on the day of the explosion, were restored to service prior to re-opening. In addition the WTC has agreed to provide, among other things, the following enhancements:

1. a modernized Class E fire alarm communications system; ✓
2. an expanded public address system to tenant spaces; ✓
3. air-cooled backup emergency generators in mechanical equipment rooms and on roofs of plaza buildings;
4. battery pack lights in elevator machine rooms and local elevator banks on main lobby/sky lobbies;
5. emergency power to smoke purge fans and increased cubic feet per minute capacity; and
6. magnetic re-entry locks which can be remotely released or automatically released in a power failure.

In addition, the Port Authority has proposed an enhanced Code compliance protocol, as evidenced by the attached letter dated March 19, 1993, from Stanley Brezenoff, Executive Director at the Port Authority to Commissioner Rivera. (See Attachment II).

RECOMMENDATIONS

The explosion incident highlights the fact that the City cannot ensure that many buildings in New York City owned by other government entities comply with New York City's Fire Prevention and Building Codes. Buildings that fail to comply with New York City Codes do not provide standard fire protection features for the fire fighting forces and standard fire safety for the occupants. Building construction as well as the fire safety systems installed may be significantly different than NYC code buildings.

All buildings in New York City should be built to codes that reflect the technical expertise and equipment capabilities of the City enforcement agencies. Firefighters and Buildings inspectors have to know what to expect when going into a building, either to inspect systems or to utilize them when fighting fires or responding to other disasters. For example, it is vital to know whether a fireman's key works in elevators in buildings not under the City's jurisdiction.

The specifics of fire safety requirements are developed not only in terms of public safety, but reflect the nature of the equipment used by the Fire Department in extinguishing fires. For example, the definition in the Building Code of a high-rise office building is determined by the length of ladders on fire trucks. Buildings over 75 or 100 feet (length of ladder) will require firefighting systems which buildings below these heights do not require.

In light of the foregoing concerns, the following recommendations are being made:

- I. The City will seek Federal and State legislation to make all buildings comply with New York City Codes. The relinquishment of a government entity's regulatory exemption would only be meaningful if such relinquishment is permanent and irrevocable and includes consent to the jurisdiction of all New York Courts and administrative tribunals. Legislation to this effect will be drafted by the City's Corporation Counsel within 45 days.
- II. Within the next 60 days, the City will be contacting all appropriate Federal, State Agencies and Authorities to gain their voluntary compliance with City codes for existing buildings and buildings under construction.
- III. The City will establish a Code Committee to research and identify necessary changes. The Committee will focus on two issues. First, the existing codes were not created to take explosions and other terrorist actions into

consideration. At a minimum, the Code Committee will review which new requirements may be needed to prevent such a local explosion from incapacitating entire buildings. For example, the question of requiring remote locations for emergency generators, or other systems, would have to be examined. Trickle down emergency lighting and other factors would also have to be explored. Another area to be considered is requiring stair pressurization even in fully sprinklered buildings.

Second, it has been nearly a decade since the last comprehensive change was made in the City's Fire Prevention and Building Codes. Even though New York City Codes are generally recognized to be the most stringent in the nation, the Committee will review all fire safety areas of the Code to determine if there have been technological or design advances that would make buildings safer and/or whether conditions have changed since 1984 that would make systems not mandated in earlier code revisions necessary today.

The Fire and Buildings Departments recognize that the issues are complicated and that practical considerations such as the feasibility of retrofitting existing buildings have to be borne in mind when framing code changes. The Committee will be comprised of the Fire Department, Buildings Department, consulting engineers, building owners and managers, and others. A report regarding commercial buildings from the Committee will be provided by the end of the year.

CONCLUSION

The one lesson that can be learned from the February 26 explosion at the WTC is that all buildings in New York City should come under City codes. We pride ourselves that our codes are among the most stringent in the nation, and we have been in the forefront in applying technological advances to assure fire and structural safety in buildings. While the concept of supremacy for higher levels of government may have constitutional or political validity in many areas, it should be suspended where the lives and safety of people living and working in New York City are concerned.